DEFENSE INFORMATION SYSTEMS AGENCY
JOINT INTEROPERABILITY TEST COMMAND
2001 BRAINARD ROAD
FORT HUACHUCA, ARIZONA 85613-7051

IN REPLY REFER TO: Networks and Transport Division (JTE) 14 June 2004

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Special Interoperability Test Certification of the Plant Equipment Incorporated (PEI) VESTA SL-100 Version 2.2, Service Pack 2, with Software Patch 3.0.0.13

References: (a) DOD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01C, "Interoperability and Supportability of Information Technology and National Security Systems," 20 November 2003

1. References (a) and (b) establish the Defense Information Systems Agency, Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification. Additional references are provided in enclosure 1.

2. The PEI VESTA SL-100 Version 2.2, Service Pack 2, with Software Patch 3.0.0.13, hereinafter referred to as the System Under Test (SUT), was tested with the Nortel Networks MSL-100 Proprietary-Phone interfaces, hardware, and software as shown in table 1. The SUT meets all of the critical interoperability requirements, and is certified for joint use within the Defense Switched Network (DSN). Although the SUT will interface with the M5300 and M5200 series proprietary P-Phones, only two P-Phone interfaces are covered by this certification. They are the M5316 and M5216. In addition to the P-Phone interfaces the M522 add-on module was also tested with both these interfaces, and is also covered by this certification. The SUT meets the critical interoperability requirements set forth in reference (c) and testing was conducted using test procedures derived from reference (d). This certification expires upon changes that affect interoperability, but no later than three years from the date of this memorandum**.**

3. This certification is based on interoperability testing conducted from 10 through 14 May 2004 by the JITC at the Global Information Grid Network Test Facility, Fort Huachuca, AZ. The Certification Testing Summary (enclosure 2) documents the test results and describes the test network. Users should verify interoperability before deploying the SUT in an environment that varies significantly from that described.

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in table 2.

Table 1. SUT MSL-100 Proprietary-Phone Interfaces

Proprietary-Phone	Hardware/Software Release
Nortel Networks M5316 Proprietary Analog Telephone	NT4X42CA Release 13
Nortel Networks M5216 Proprietary Analog Telephone	NT4X44CA Release 3
Nortel Networks M522 Add-on Module	NT4X43CA Release 2

Legend:

M - Meridian
MSL - Meridian Switching Load

Table 2. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Critical Functional Requirements	Met	Requirement Reference
UTP Analog Proprietary	Yes	Yes	MLPP[see note]	Yes	GSCR 3.1.1
			Non-Secure Voice MOS	Yes	CJCSI 6215.01B

Legend:

CJCSI - Chairman of Joint Chiefs of Staff Instruction
GSCR - Generic Switching Center Requirements
MLPP - Multi-Level Precedence and Preemption
MOS - Mean Opinion Score
SUT - System Under Test
UTP - Unshielded Twisted Pair Copper

Note: Single directory number only. Multiple appearance directory numbers (MADN) not certified. The operational impact is minor. The SUT does not support alerting (ringing) cadence for precedence calls above ROUTINE per the GSCR table 5-4; however the alerting cadence for precedence calls above ROUTINE can be heard by the M5316 or M5216 telephones. The operational impact is minor.

5. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified but Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/.gov users on the NIPRNet at https://stp.fhu.disa.mil/. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125/ (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi.

6. The JITC point of contact is Capt. Michel Roy, DSN 821-8575, or commercial (520) 533-8575. The e-mail address is roym@fhu.disa.mil.

FOR THE COMMANDER:

2 Enclosures a/s

LESLIE CLAUDIO
Chief
Networks and Transport Division

JITC Memo, JTE, Special Interoperability Test Certification of the PEI VESTA SL-100 Version 2.2, Service Pack 2, with Software Patch 3.0.0.13

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ADDITIONAL REFERENCES

(c) Defense Information Systems Agency, "Department of Defense Voice Networks Generic Switching Center Requirements (GSCR)," 8 September 2003
(d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP)," 17 June 1999

CERTIFICATION TESTING SUMMARY

1. SYSTEM TITLE. The Plant Equipment Incorporated (PEI) VESTA SL-100 Version 2.2, Service Pack 2, with Software Patch 3.0.0.13, hereinafter referred to as System Under test (SUT).

2. PROPONENT. Defense Information Systems Agency (DISA).

3. PROGRAM MANAGERS. Mr. Howard Osman, GS23, Room 5W23, 5275 Leesburg Pike, Falls Church, VA 22041, E-mail: Osmanh@ncr.disa.mil.

4. TESTERS. Joint Interoperability Test Command (JITC), Ft. Huachuca, AZ.

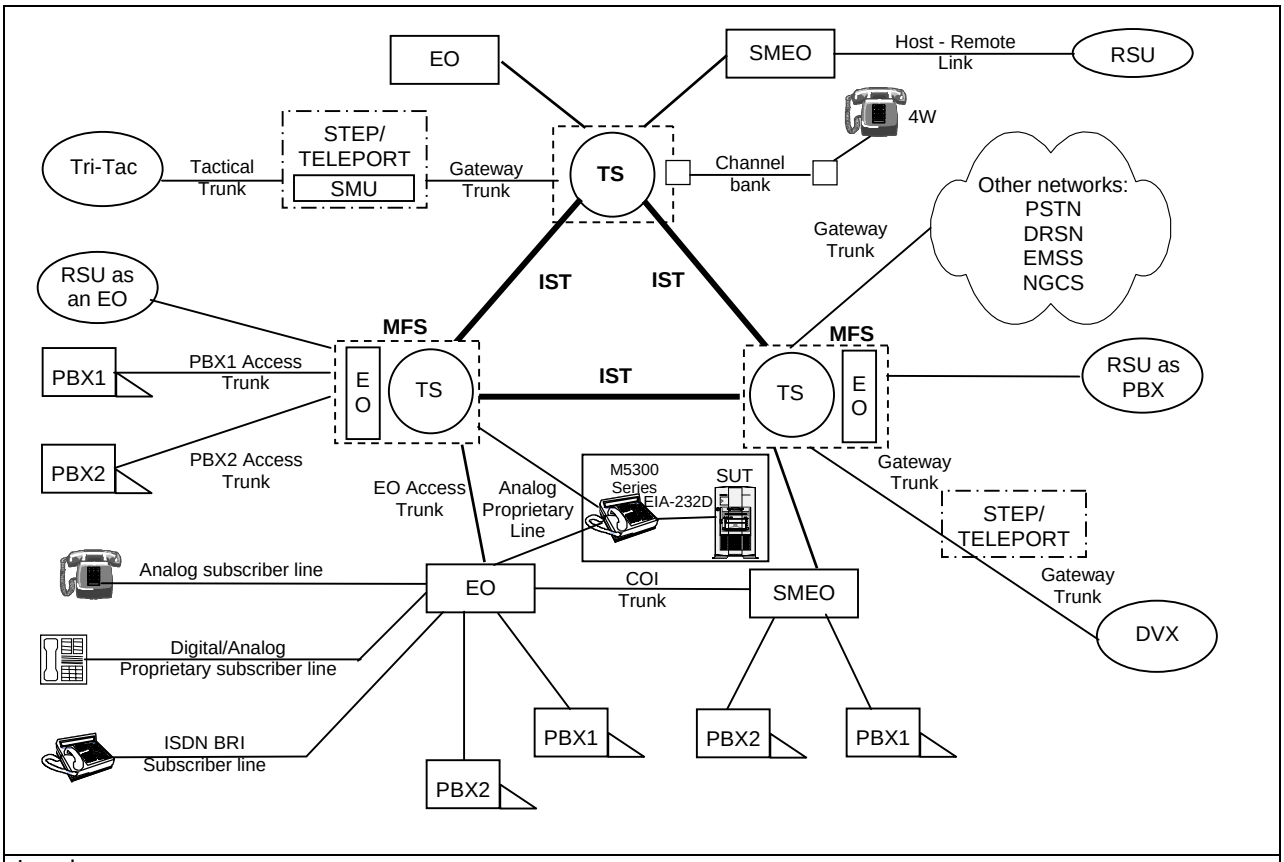
5. SYSTEM UNDER TEST DESCRIPTION. The SUT utilizes the Nortel Networks MSL-100 Central Office technology with the flexibility and control of the premises Meridian-1. The SUT centralizes Federal call-center applications on an open platform that can integrate telephony functions with mapping, incident tracking, radio, and Computer Aided Dispatch. It is designed to interface with the Nortel Networks Proprietary P-Phones. Although the SUT will interface with the M5300 and M5200 series proprietary P-Phones, only two P-Phone interfaces are covered by this certification. They are the M5316 and M5216. In addition to the P-Phone interfaces the M522 add-on module was also tested with both these interfaces, and is also covered by this certification.

6. OPERATIONAL ARCHITECTURE. The Generic Switching Center Requirements (GSCR) Defense Switched Network (DSN) architecture in figure 2-1 depicts the relationship of the SUT to the DSN switches.

7. REQUIRED SYSTEM INTERFACES. Requirements specific to the SUT and interoperability results are listed in table 2-1. These requirements are derived from:

a. GSCR (reference (c)) Interface and Functional Requirements (FRs).

b. The overall system interoperability performance is derived from test procedures listed in reference (d).



Legend:

4W	- 4 wire
BRI	- Basic Rate Interface
COI	- Community of Interest
EIA	- Electronic Industries Alliance
DRSN	- Defense Red Switch Network
DSN	- Defense Switched Network
DVX	- Deployable Voice Exchange
EMSS	- Enhanced Mobile Satellite System
EO	- End Office
ISDN	- Integrated Services Digital Network
IST	- Interswitch Trunk
MFS	- Multifunction Switch
MLPP	- Multi-Level Precedence and Preemption
NATO	- North Atlantic Treaty Organization
NGCS	- NATO Gateway Communications Switch
PBX	- Private Branch Exchange
PBX1	- PBX Type 1 (MLPP)
PBX2	- PBX Type 2 (non-MLPP)
PSTN	- Public Switched Telephone Network
RSU	- Remote Switching Unit
SMEO	- Small End Office
SMU	- Switched Multiplex Unit
STEP	- Standardized Tactical Entry Point
SUT	- System Under Test
Tri-Tac	- Tri-Service Tactical
TS	- Tandem Switch

Figure 2-1. DSN Architecture

8. TEST NETWORK DESCRIPTION. The SUT was tested at JITC's Global Information Grid Network Test Facility in a manner and configuration similar to that of the DSN operational environment. Testing of the system's required functions and features was conducted using the test configuration depicted in figure 2-2.

Table 2-1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Critical Functional Requirements	Met	Requirement Reference
UTP Analog Proprietary	Yes	Yes	MLPP[see note]	Yes	GSCR 3.1.1
			Non-Secure Voice MOS	Yes	CJCSI 6215.01B

Legend:

CJCSI - Chairman of Joint Chiefs of Staff Instruction
GSCR - Generic Switching Center Requirements
MLPP - Multi-Level Precedence and Preemption
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SUT - System Under Test
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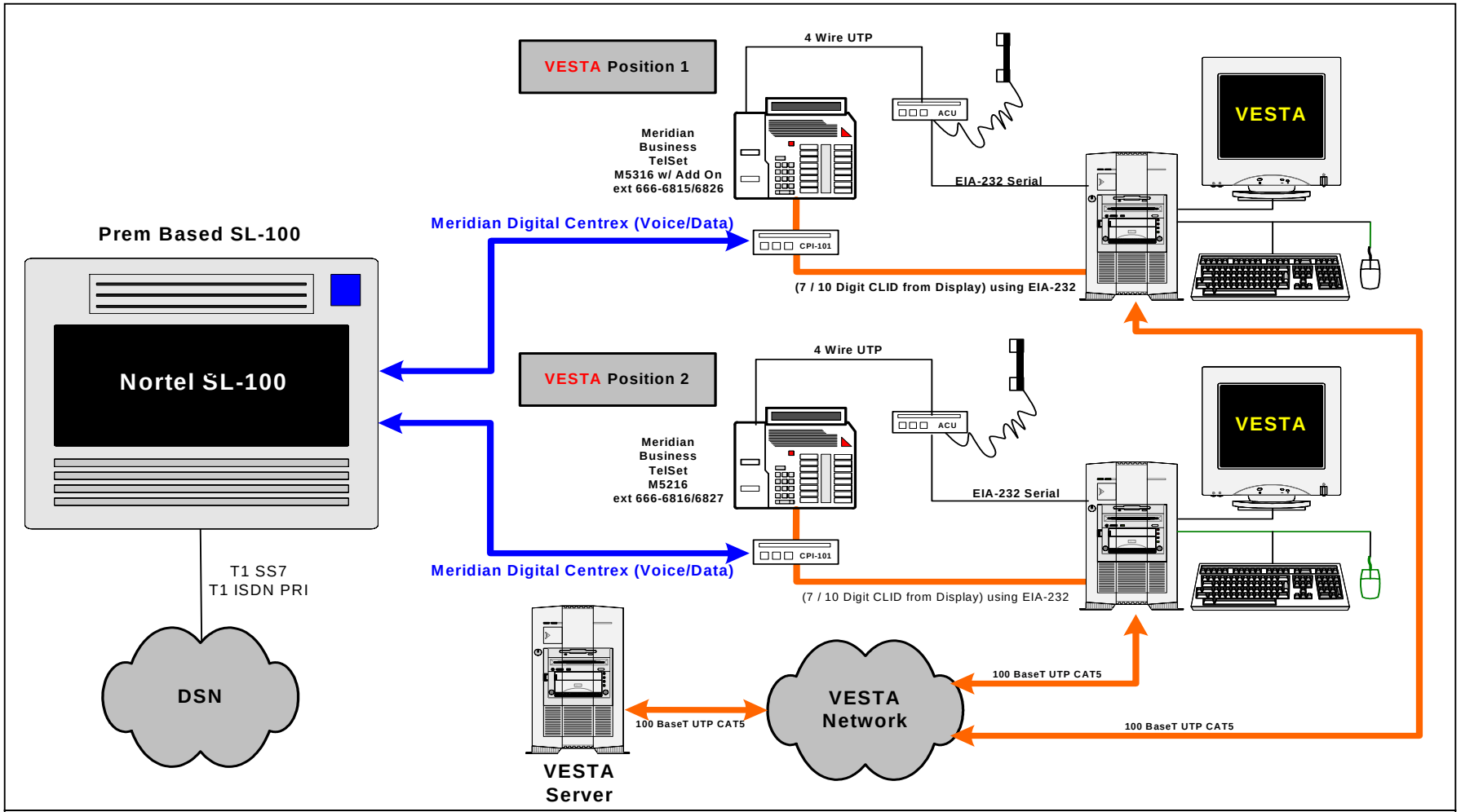
Note: Single directory number only. Multiple appearance directory numbers (MADN) not certified. The operational impact is minor. The SUT does not support alerting (ringing) cadence for precedence calls above ROUTINE per the GSCR table 5-4; however the alerting cadence for precedence calls above ROUTINE can be heard by the M5316 or M5216 telephones. The operational impact is minor.



Legend:

ACU	- Audio Control Unit	DSN	- Defense Switched Network	Prem	- Premise
100 Base T	- 100 Megabits Ethernet Twisted Pair	EIA	- Electronic Industries Alliance	PRI	- Primary Rate Interface
CAT	- Category	ext	- Extension	SUT	- System Under Test
CLID	- Call Line Identification	ISDN	- Integrated Services Digital Network	T1	- Digital Transmission Link level 1 (1.544 Mbps)
CPI	- Computer P-Phone Interface	Mbps	- Megabits per second	UTP	- Unshielded Twisted Pair

Figure 2-2. SUT Test Configuration

9. SYSTEM CONFIGURATIONS. Table 2-2 provides the system configurations and their respective software used in the test.

Table 2-2. Tested System Configurations

System Name	Hardware/Software Release
Nortel Networks MSL-100	SE06
Nortel Networks M5316 Proprietary Analog Telephone	NT4X42CA Release 13
Nortel Networks M5216 Proprietary Analog Telephone	NT4X44CA Release 3
Nortel Networks M522 Add-on Module	NT4X43CA Release 2
VESTA PEI SL-100	Software Release 2.2, Service Pack 2, with Software Patch 3.0.0.13
Legend: M - Meridian MSL - Meridian Switching Load PEI - Plant Equipment Incorporated	

10. TEST LIMITATIONS. None.

11. TEST RESULTS

a. Discussion

(1) Multi-Level Precedence and Preemption (MLPP). The SUT met all the critical interoperability requirements for MLPP per the GSCR paragraph 3.1.1. The following discrepancies noted during testing have a minor operational impact:

(a) MLPP supported with single directory numbers only. Multiple appearance directory numbers not certified.

(b) The SUT does not support alerting (ringing) cadence for precedence calls above ROUTINE per the GSCR table 5-4. The alerting cadence for precedence calls above ROUTINE, however can be heard by the M5316 or M5216 telephones

(2) Non-Secure Voice Mean Opinion Score (MOS). The SUT MOS was measured using the SAGE 935AT test set. The MOS of 4.0 or better was met per the Chairman of the Joint Chiefs of Staff Instruction 6215.01B.

b. Test Summary. The VESTA SL-100 Version 2.2, Service Pack 2, with software patch 3.0.0.13 meets the critical interoperability requirements and is certified for joint use within the DSN.

12. TEST AND ANALYSIS REPORT. No detailed test report was developed per the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified but Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at

https://stp.fhu.disa.mil/. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125/ (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi.